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TECHNICAL NOTEC

LAKE STATES FOREST EXPERIMENT STATION UNIVERSITY FARM ST. PAUL I, MINNESOTA

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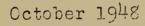
No. 302

More Ties on Better Sites

As the productive capacity of forest land improves, more and better grades of railroad cross ties are obtained per acre of similarly stocked area. The effect of site is more striking than is, generally assumed. Recent studies of timber yields of mixed-oak farmwoods in southwestern Wisconsin have indicated the following yields of cross ties obtainable from well-stocked stands (predominantly red oak) at 100 years of age:

Site quality	Average d.b.h. of dominant trees	ర-foot ties		Grades
		Per acre	Per tree	3, 4, 5
	Inches	Number	Number	Percent
Very poor Poor Hedium Good Very good	10.4 12.3 14.1 15.9 17.7	100 172 273 316 360	1.0 1.4 2.3 3.0 3.8	38 52 62 78 88

As compared to very poor sites, medium sites produce more than 2-1/2 times and very good sites more than 3-1/2 times as many cross ties, per acre. The proportion of grades 3, 4, and 5, also increases rapidly with the increase in site quality. The probable returns per acre, therefore, are increased by both quantity and quality of ties produced on the better sites.



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